DOCUMENT RESUME

ED 057 931 RC 005 768

AUTHOR Hollingshead, Maybelle Clayton; Clayton, Charles
TITLE Comparison of the Wisc Patterns of Retarded and Non-Retarded Readers - Indian Youth.
SPONS AGENCY Bureau of Indian Affairs (Dept. of Interior), Anadarko, Okla. Anadarko Regional Office.
PUB DATE 1 Jul 71
NOTE 14p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Adolescents; *American Indians; Coded Speech; *Comparative Analysis; Intelligence Quotient; *Intelligence Tests; Low Achievers; Performance; *Reading Achievement; Sex Differences; Testing; Test Validity; Verbal Ability; Visual Measures; Vocabulary
IDENTIFIERS *Wechsler Intelligence Scale for Children

ABSTRACT

In this 4-part study, 1970 test data from 45 American Indian youth (aged 11-15) attending Riverside Summer Institute in Anadarko, Oklahoma, were examined. Part 1 of the study sought to identify the pattern of strengths and weaknesses on the "Wechsler Intelligence Scale for Children" (WISC) of Indian students with average intelligence and average or above-average reading ability. Strengths were in similarities, picture completion, block design, and coding; performance scale IQs exceeded verbal scale IQs; and weaknesses were noted on the vocabulary and picture arrangement subtest. Part 2 dealt with patterns of strengths and weaknesses on the WISC of Indian students with average intelligence and below-average reading ability. Strengths were in picture arrangement, block design, object assembly, and coding, and weaknesses were in information, comprehension, arithmetic, similarities, and vocabulary. Part 3 compared the performance on the WISC of retarded and nonretarded readers (as classified by the Gates MacGinitie Reading Test). The verbal scale IQ scores of both groups were lower than the performance scale IQ scores, and both groups exhibited weaknesses in vocabulary and strengths in picture completion, block design, and coding. Part 4 identified the strengths and weaknesses of male as opposed to female retarded readers. The mean verbal scale score (WISC) of males was about 10 points lower than that for females; the mean performance score of the males was 4.8 points higher than that for females; and the mean full scale scores of males and females were within 1 point of each other. The document contains a 5-item bibliography and 4 tables showing mean WISC scores. (MJB)

ED0 57931

Comparison of The Wisc Patterns Of Retarded and Non-Retarded Readers — Indian Youth —

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

A Research Project

by

Maybelle Clayton Hollingshead, Ed. D.

Professor at Oklahoma College of Liberal Arts

Chickasha, Oklahoma

and

Charles Clayton

Superintendent of Schools

Wagoner, Oklahoma

Submitted to Gabe Paxton
Bureau of Indian Affairs
Anadarko, Oklahoma
July 1, 1971

RD0 57768

TABLE OF CONTENTS

Chapter		Page
I.	INTRODUCTION	1
	Statement of the Problem	1
	Limitations of the Study	2
	Definition of Terms	2
II.	METHODOLOGY AND DESIGN	3
	Population of the Study	3
	Procedures	4
III.	RESULTS OF THE STUDY	4
IV.	SUMMARY AND CONCLUSIONS	6
	General Summary of the Investigation	6
	Summary of Results	7
	Concluding Statements	8
BIBLIOGRAPHY		9
APPENDIX		10

LIST OF TABLES

Table | Page

I. Mean, WISC Verbal Scale, Performance Scale, and Full Scale Scores for Males, Females, and Total Sample Retarded and Non-Retarded Readers 5

II. Mean WISC Sub Test Scores for Retarded, Non-Retarded, Male Retarded and Female Retarded Readers 6

LIST OF APPENDICES

Appendix A--Exhibit

1. Mean WISC Sub Test Scores for Retarded and Non-Retarded Readers 10

2. Mean WISC Sub Test Scores for Male Retarded and Female Retarded Readers 11

INDIAN EDUCATION

COMPARISON OF THE WISC PATTERNS OF RETARDED AND NON-RETARDED INDIAN YOUTH

A Research Project by

Maybelle Hollingshead, Ed. D.
Professor at Oklahoma College of Liberal Arts
Chickasha, Oklahoma

Charles Clayton
Superintendent of Schools
Wagoner, Oklahoma

INTRODUCTION

The problem of whether Indian youth perform in a typical way on the WISC is a consideration of importance to educators. In most studies the performance scores are significantly higher than verbal scores of retarded readers. Graham and Kamono discovered that unsuccessful readers were low in all verbal tests and the digit symbol subtests; Altus, Burks and Graham indicate that retarded readers score low on arithmetic and the coded subtests. Bruce and Burks also found the information subtest to be low. Bruce and Burks concluded that the comprehension, picture arrangement, and block design subtest scores were significantly high for the retarded readers.

Statement of the Problem

The objectives of the present study are to identify the pattern of strengths and weaknesses on the WISC of Indian students with average intelligence and average or above average reading ability; identify the

patterns of strengths and weaknesses on the WISC of Indian students with average intelligence and below average reading ability; compare retarded and non-retarded readers; and compare and analyze data according to sex.

Limitations of the Study

This study was confined to the 104 Indian youth attending the Riverside Summer Institute at Anadarko, Oklahoma, in 1970. It was further limited to 45 Indian youth between the ages of 11-8 and 15-5, with a mean chronological age of 13-10 for boys and 14-7 for girls.

Definition of Terms

The following are definitions and clarifications of terms as they are applied throughout this study.

Wechsler Intelligence Scale for Children (1949), (WISC), published by the Psychological Corporation. This test is a comprehensive individually administered battery for use with children whereby IQs are obtained by comparing each subject's test performance, not with a composite age group, but exclusively with the scores obtained by individuals in a single age group. Three IQ scores were obtained: Full Scale, Verbal Scale, and Performance Scale.

WISC Full Scale Intelligence. Intelligence score obtained on both verbal and performance items by converting the sum of the scaled scores to an intelligence scale with a mean of 100 and a standard deviation of 15.

WISC Verbal Scale Intelligence. Intelligence score on verbal items

obtained by translation of the Verbal Scaled Scores to an IQ scale with a mean of 100 and a standard deviation of 15.

WISC Performance Scale Intelligence. Intelligence score on performance items obtained by the translation of the Performance Scaled Scores to an IQ scale with a mean of 100 and standard deviation of 15.

Indian Youth. This term refers to Indian young people who ranged in age from eleven years and eight months to fifteen years and five months. The mean chronological age for girls was 14.7 while the mean chronological age for boys was 13.10.

Average Intelligence. An IQ score of 90 and above on the Wechsler Intelligence Scale for Children.

Below Average Intelligence. An IQ score which fell below 90 on the Wechsler Intelligence Scale for Children.

Retarded Reader. A student who is reading two years and more below grade level.

Grade Level. The grade in which a student should be enrolled according to present Oklahoma school entrance requirements.

Gates MacGinitie Reading Test-Comprehension subtest. This 52 item test consists of sentences and short paragraphs with words omitted. The reader chooses the correct word or words to complete the sentences.

METHODOLOGY AND DESIGN

Population of the Study

The Wechsler Intelligence Scale for Children and the Gates Mac Ginitie Reading Test were administered to 104 Indian youth. Complete data were obtained on eighty-five of these Indian boys and girls.

enrolled at the Riverside Summer Institute, Anadarko, Oklahoma, in 1970. Forty of the 85 youth were not included in the study since their intelligence was below 90-average (19 females had below average IQ, while 27 females were average and above; 21 males had below average IQ while 22 males had average and above IQ).

Procedures

The comprehension subtest of the Gates MacGinitie Reading Test was used to estimate reading grade level, and all students reading two years and more below grade level were considered as retarded readers. Non-retarded readers included all students whose reading ability ranged from one year below grade level to those reading above grade level.

This study was the analysis of the test scores of 35 retarded readers with average intelligence of 90 or above and 10 non-retarded readers with an average IQ of 90 or above. The retarded readers were categorized by sex with 16 girls and 19 boys.

Statistical treatment was given the raw data to obtain the mean IQ and the mean WISC scaled scores. WISC patterns of retarded and non-retarded readers were compared by means of graphs.

RESULTS OF THE STUDY

The mean WISC verbal scale for retarded readers was 93.5 while the mean WISC verbal scale score for non-retarded readers was 100.0. The male mean verbal scale score was 86.8 for retarded readers and 97.7 for the male non-retarded readers. The mean WISC verbal scale for female retarded readers was 95.3 and the female verbal scale score was 101.0

for non-retarded readers.

The mean WISC performance scale score for retarded readers was 107.7 while the mean WISC performance scale score for non-retarded readers was 106.9. The mean male performance scale score was 109.9 for retarded readers, and the mean male non-retarded scale score was 102.0. The mean WISC performance scale for female retarded readers was 105.1, and the mean female scale score was 109.0 for non-retarded readers.

The mean WISC full scale score for retarded readers was 100.4 while a mean WISC full scale score for non-retarded readers was 103.6. The mean male full scale score was 100.7 for male retarded readers and a 99.7 mean scale score for male non-retarded readers.

The mean WISC full scale for female retarded readers was 99.9 while a mean WISC full scale score for female non-retarded readers was 105.3.

TABLE I

MEAN WISC VERBAL SCALE, PERFORMANCE SCALE, AND FULL SCALE SCORES FOR MALES, FEMALES, AND TOTAL SAMPLE RETARDED AND NON-RETARDED READERS

	Non-Retarded Readers Mean V S	Retarded Readers Mean V S	Non-Ret. Readers Mean P S	Retarded Readers Mean P S	Non-Ret. Readers Mean F S	Retarded Readers Mean F S
Male & Female	100.0	93.5	106.9	107.7	103.6	100.4
Male	97.7	86.8	102.0	109.9	99.7	100.7
Female	101.0	95.3	109.0	105.1	105.3	99.9

The mean scale scores on the WISC for the retarded readers and the non-retarded readers are included in Table II. Table II also includes

the mean scale scores on the WISC female retarded readers and male retarded readers.

TABLE II

MEAN WISC SUB-TEST SCORES FOR RETARDED, NON-RETARDED, MALE RETARDED AND FEMALE RETARDED READERS

	I	C	A	S	V	DS	PC	PA	Bl	OA	C
Male & Female Non-Retarded Readers	10.6	9.6	9.8	11.1	8.2	9.8	11.5	8.9	11.1	9.5	14.7
Male & Female Retarded Readers	8.9	8.1	8.7	8.9	7.6	9.5	11.5	10.3	11.5	10.7	11.2
Male Ret'd Readers	8.5	7.9	8.3	8.3	7.6	8.9	11.9	10.6	12.0	11.0	11.9
Female Ret. Readers	8.7	8.2	9.2	9.9	7.6	10.2	11.0	9.9	10.8	10.5	11.2

The mean scale scores on the WISC are presented in graphical form in Appendix A.

SUMMARY AND CONCLUSIONS

General Summary of the Investigation

This investigation examined the patterns of retarded and non-retarded readers on the Wechsler Intelligence Scale for Children. Difference in pattern on the WISC of male retarded readers and female retarded readers was examined. The Gate MacGinitie Reading comprehension subtest was the criterion variable for classification of students as being retarded and non-retarded readers.

The students in this study included all of the 104 students at the Riverside Summer Institute at Anadarko, Oklahoma, in 1970. Complete data were obtained on 45 students which included nineteen males and sixteen females. These students were administered the Wechsler Intelligence Scale for Children and the Gates MacGinitie Reading Test, Form E. The data derived from these groups in various combinations were examined through mean scores and portrayed in graphs and tables.

Summary of Results

The results of the first portion of the study sought to identify the pattern of strengths and weaknesses on the WISC of Indian students with average intelligence and average or above average reading ability.

The strengths of the non-retarded readers were as follows: similarities, picture completion, block design, and coding. Also, the performance scale IQs exceeded the verbal scale IQs. The weaknesses of the non-retarded reader were noted on the vocabulary and picture arrangement sub test.

The second portion of the study sought to identify the patterns of weaknesses and strengths on the WISC of Indian students with average intelligence and below average reading ability. The strengths of the retarded reader include: picture arrangement, block design, object assembly, and coding. The weaknesses were found in the following areas: information, comprehension, arithmetic, similarities, and vocabulary.

The third portion of the study sought to compare the performance on the WISC of retarded and non-retarded readers. The verbal scale IQ

scores of both retarded and non-retarded readers were lower than the performance scale IQ scores. Both the retarded and non-retarded readers exhibited weaknesses in vocabulary and strengths in picture completion, block design, and coding.

The fourth portion of the study sought to identify the strengths and weaknesses of the male and female retarded readers. The male and female retarded readers showed significant differences between achievement on the verbal scale and performance scale with the verbal scales being lower. The mean verbal scale score of the male retarded readers was about 10 points lower than the mean verbal scale score of the female retarded readers, while the mean performance score of the males was 4.8 points higher than the mean performance score of the female retarded readers. However, the mean full scale scores of males and females were within one point of each other. The male retarded readers scored lower on the digit span and similarities subtest than the females, while the female retarded reader scored lower on the block design subtest than the males.

Concluding Statements

Significant differences in the performances of Indian youth on the sub tests of the WISC were noted. Differences in the performance of male and female Indian retarded readers were evident.

The results of this study are offered as an attempt to aid in the understanding of an instrument which is being used in Bureau schools.

BIBLIOGRAPHY

1. Altus, Grade. "A WISC Profile for Retarded Readers," Journal of Consulting Psychology, XX (1956).

2. Burks, H. F., and Bruce, Paul. "The Characteristics of Poor and Good Readers as Disclosed by the Wechsler Intelligence Scale for Children," Journal of Educational Psychology, XLIV (1955).

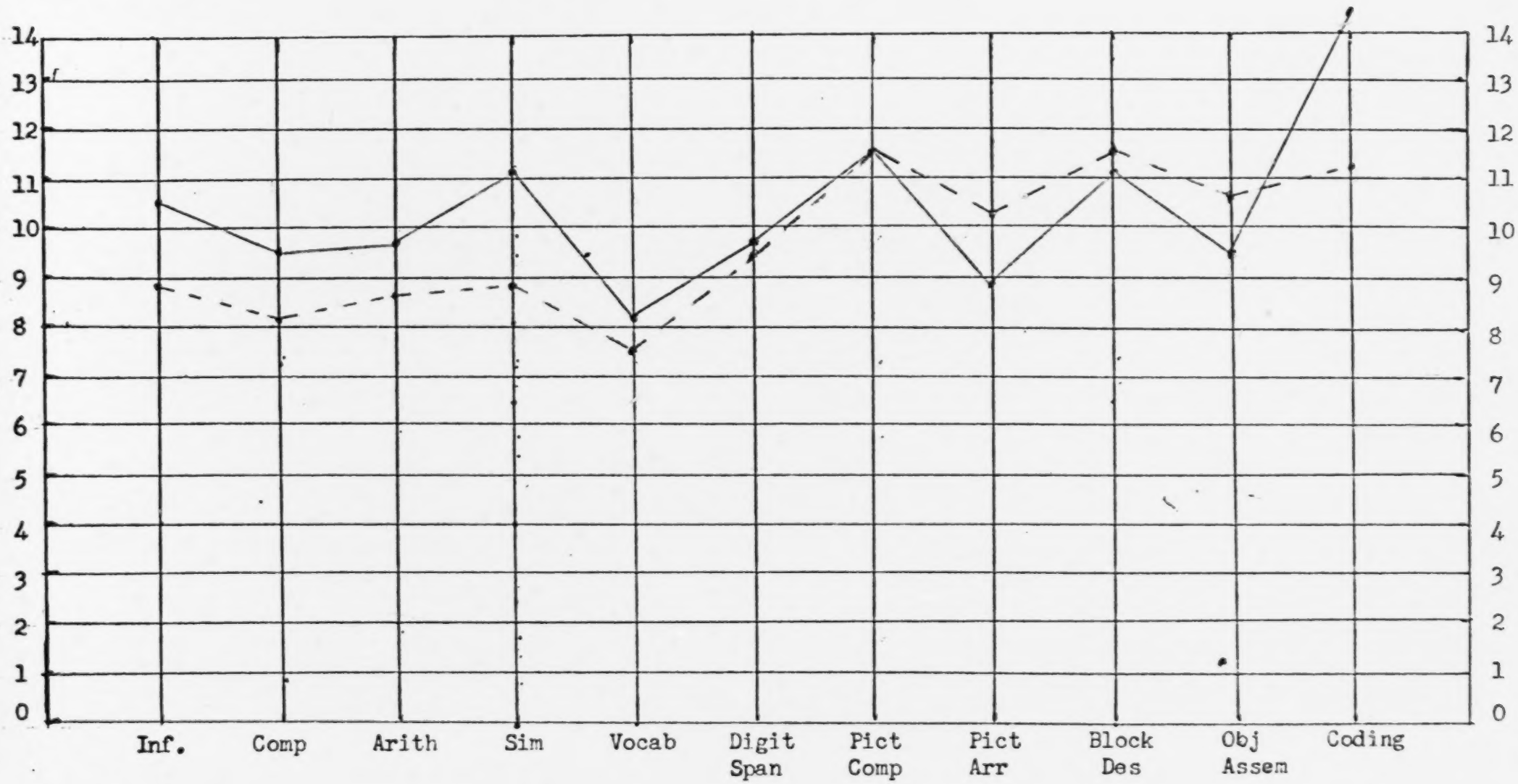
3. Graham, Earl E. "Wechsler-Bellevue and WISC Scattergrams of Unsuccessful Readers," Journal of Consulting Psychology, XVI (1952).

4. Graham, E. E., and Kamono, D. "Reading Failure as a Factor in the WAIS Subtest Patterns of Youthful Offenders," Journal of Clinical Psychology, XIV (1958).

5. Wechsler, David. A Manual for the Wechsler Intelligence Scale for Children. New York: Psychological Corporation, 1949.

APPENDIX A--EXHIBIT 1

MEAN WISC SUB-TEST SCORES FOR RETARDED AND NON-RETARDED READERS

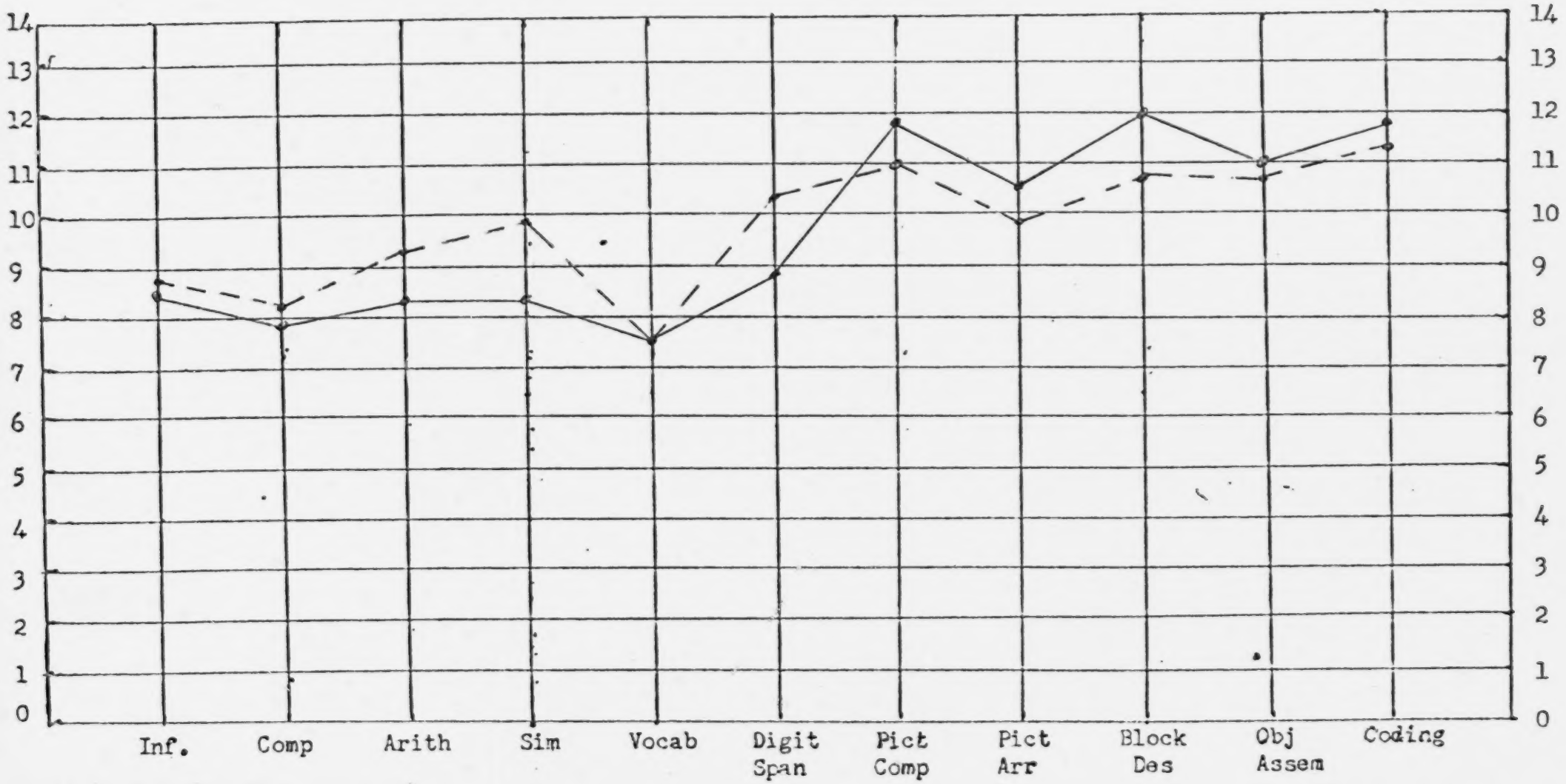


Code: Retarded - - - - - - - -

Non-Retarded ————————

APPENDIX A--EXHIBIT 2

MEAN WISC SUB TEST SCORES FOR MALE RETARDED AND FEMALE RETARDED READERS



Code: Male Retarded Readers _____

Female Retarded Readers - - - - - - - - - - -